

IN THE CLAIMS

The following is a complete listing of the claims, and replaces all earlier versions and listings.

1. (Currently Amended) A method of scrambling a digital signal, comprising the steps of:

decomposing the signal into several regions each containing digital data;

encoding the signal in a format comprising header data specific to each region and which comprise at least one part representing the amplitude of the data of the region considered; and

modifying among the header data specific to at least one region of the signal, the part of the header data representing the amplitude of the data of the region considered, said modifying resulting in an erroneous value for the amplitude of the data upon decoding

~~wherein said modifying step includes making use of at least one transformation key K_u .~~

2. (Previously Presented) A method according to claim 1, wherein the digital data of the signal are digital samples representing physical quantities, and

the part of the header data representing the amplitude of the samples of the

region considered provides a number of bitplanes according to which the amplitudes of the samples are encoded based on the difference between (1) a number of reference bitplanes, depending on the signal and which is deduced from information present in the signal and (2) a number of zero bitplanes which is contained in the part of the header data.

3. (Previously Presented) A method according to claim 2, wherein said modifying step includes providing for modifying the number of zero bitplanes.

4. (Previously Presented) A method according to claim 3, wherein said modifying step includes providing for increasing the number of zero bitplanes.

5. (Canceled).

6. (Previously Presented) A method according to claim 1, wherein the transformation key K_u depends on the at least one region considered.

7. (Previously Presented) A method according to claim 1, wherein said modifying step involves in particular the generation of a pseudo-random sequence based on the transformation key K_u .

8. (Previously Presented) A method according to claim 1, further comprising a step of transmitting the transformation key K_u .

9. (Previously Presented) A method according to claim 1, further comprising a step of transmitting the signal so scrambled.

10. (Currently Amended) A method of descrambling a digital signal decomposed into a plurality of regions each containing digital data, the signal being encoded in a format comprising header data specific to each region and which comprise at least one part representing the amplitude of the data of the region considered, the method comprising the steps of:

receiving the signal of which the part of the header data representing the amplitude of the data of at least one region has undergone a modification before transmission of the signal, the modification resulting in an erroneous value for the amplitude of the data upon decoding; and

modifying in reverse the modified part of the header data in order to restore the unmodified part of the header data of the signal.

11. (Previously Presented) A method according to claim 10, wherein the digital data of the signal are digital samples representing physical quantities, and

the part of the header data representing the amplitude of the samples of the region considered provides a modified number of bitplanes according to which the amplitudes of the samples are encoded based on the difference between (1) a number of reference bitplanes, depending on the signal and which is deduced from information present in the signal and (2) a modified number of zero bitplanes which is contained in the part of the header data.

12. (Previously Presented) A method according to claim 11, wherein said step of reverse modifying provides for modifying the modified number of zero bitplanes.

13. (Previously Presented) A method according to claim 12, wherein said step of reverse modifying provides for reducing the modified number of zero bitplanes.

14. (Previously Presented) A method according to claim 10, wherein said step of reverse modifying makes use of at least one transformation key K_u .

15. (Previously Presented) A method according to claim 14, wherein said the transformation key K_u depends on the at least one region considered.

16. (Previously Presented) A method according to claim 14, wherein said step of reverse modifying involves in particular the generation of a pseudo-random sequence based on the transformation key K_u .

17. (Previously Presented) A method according to claim 14, further comprising a prior step of receiving the transformation key K_u .

18. (Currently Amended) A device for scrambling a digital signal, comprising:

- means for decomposing the signal into several regions each containing digital data;
- means for encoding the signal in a format comprising header data specific to each region and which comprise at least one part representing the amplitude of the data of the region considered; and
- means for modifying, among the header data specific to at least one region of the signal, the part of the header data representing the amplitude of the data of the region considered, the modifying resulting in an erroneous value for the amplitude of the data upon decoding

~~wherein said modifying means make use of at least one transformation key~~
 K_u .

19. (Previously Presented) A device according to claim 18, wherein the digital data of the signal are digital samples representing physical quantities, and the part of the header data representing the amplitude of the samples of the region considered provides a number of bitplanes according to which the amplitudes of the samples are encoded based on the difference between (1) a number of reference bitplanes, depending on the signal and which is deduced from information present in the signal and (2) a number of zero bitplanes which is contained in the part of the header data.

20. (Previously Presented) A device according to claim 19, wherein said modifying means modify the number of zero bitplanes.

21. (Previously Presented) A device according to claim 20, wherein said modifying means increase the number of zero bitplanes.

22. (Canceled).

23. (Previously Presented) A device according to claim 18, wherein the transformation key K_u depends on the at least one region considered.

24. (Previously Presented) A device according to claim 20, further comprising means for generating a pseudo-random sequence based on the transformation key Ku.

25. (Previously Presented) A device according to claim 18, further comprising means for transmitting the transformation key Ku.

26. (Previously Presented) A device according to claim 18, further comprising means for transmitting the signal so scrambled.

27. (Currently Amended) A device for descrambling a digital signal decomposed into a plurality of regions each containing digital data, the signal being encoded in a format comprising header data specific to each region and which comprise at least one part representing the amplitude of the data of the region considered, the device comprising:

means for receiving the signal of which the part of the header data representing the amplitude of the data of at least one region has undergone a modification before transmission of the signal, the modification resulting in an erroneous value for the amplitude of the data upon decoding; and

means for reverse modifying the modified part of the header data in order to restore the unmodified part of the header data of the signal.

28. (Previously Presented) A communication apparatus, comprising a device for scrambling a digital signal according to claim 18.

29. (Previously Presented) A communication apparatus, comprising a device for descrambling a digital signal according to claim 27.

30. (Previously Presented) An information storage means which can be read by a computer or a microprocessor containing code instructions of a computer program for executing the steps of a method of scrambling a digital signal, the method comprising the steps of:

decomposing the signal into several regions each containing digital data;

encoding the signal in a format comprising header data specific to each region and which comprise at least one part representing the amplitude of the data of the region considered; and

modifying among the header data specific to at least one region of the signal, the part of the header data representing the amplitude of the data of the region considered.

31. (Previously Presented) An information storage means which can be read by a computer or a microprocessor containing code instructions of a computer program for executing the steps of a method of descrambling a digital signal decomposed into a plurality of regions each containing digital data, the signal being encoded in a format

comprising header data specific to each region and which comprise at least one part representing the amplitude of the data of the region considered, the method comprising the steps of:

receiving the signal of which the part of the header data representing the amplitude of the data of at least one region has undergone a modification before transmission of the signal; and

modifying in reverse the modified part of the header data in order to restore the unmodified part of the header data of the signal.

32. (Previously Presented) A partially or totally removable information storage means which is readable by a computer or a microprocessor containing code instructions of a computer program for executing the steps of a method of scrambling a digital signal, the method comprising the steps of:

decomposing the signal into several regions each containing digital data;

encoding the signal in a format comprising header data specific to each region and which comprise at least one part representing the amplitude of the data of the region considered; and

modifying among the header data specific to at least one region of the signal, the part of the header data representing the amplitude of the data of the region considered.

33. (Previously Presented) A partially or totally removable information storage means which is readable by a computer or a microprocessor containing code instructions of a computer program for executing the steps of a method of descrambling a digital signal decomposed into a plurality of regions each containing digital data, the signal being encoded in a format comprising header data specific to each region and which comprise at least one part representing the amplitude of the data of the region considered, the method comprising the steps of:

receiving the signal of which the part of the header data representing the amplitude of the data of at least one region has undergone a modification before transmission of the signal; and

modifying in reverse the modified part of the header data in order to restore the unmodified part of the header data of the signal.

34. (Previously Presented) A computer program stored in a computer-readable medium which can be loaded into a programmable apparatus, containing sequences of instructions or portions of software code for implementing the steps of the method of scrambling a digital signal according to claim 1, when the computer program is loaded and executed by the programmable apparatus.

35. (Previously Presented) A computer program stored in a computer-readable medium which can be loaded into a programmable apparatus, containing

sequences of instructions or portions of software code for implementing the steps of the method of descrambling a digital signal according to claim 10, when the computer program is loaded and executed by the programmable apparatus.

36. (New) A method according to claim 1, wherein said modifying step includes making use of at least one transformation key K_u .